

ABSTRACT:

The invention relates to a method of converting a stream of databits of a binary information signal into a stream of databits of a constrained binary channel signal. This stream of databits of the binary information signal is divided into n -bit information words.

These information words are converted into m_1 -bit channel words, in accordance with a channel code C_1 , or m_2 -bit channel words, in accordance with a channel code C_2 , where m_1 , m_2 and n are integers for which it holds that $m_2 > m_1 \geq n$. The m_2 -bit channel word is chosen from of at least two m_2 -bit channel words, at least two of which have opposite parities, the concatenated m_1 -bit channel words and the m_2 -bit channel words complying with a runlength constraint of the binary channel signal. The method comprises the repetitive and/or alternate steps of:

- selecting the m_1 -bit channel word from a set out of a plurality of sets of m_1 -bit channel words, each set comprising only m_1 -bit channel words having a beginning part out of a subset of beginning parts of the m_1 -bit channel words, each set being associated with a coding state of channel code C_1 , the coding state being established in dependence upon an end part of the preceding channel word,

or:

- selecting the m_2 -bit channel word from a set out of a plurality of sets of m_2 -bit channel words, which selection depends on the end part of the preceding channel word, each set comprising only m_2 -bit channel words having a beginning part out of a subset of beginning parts of the m_2 -bit channel words belonging to said set, each set being associated with a coding state of channel code C_2 , the coding state being established in dependence upon an end part of the preceding channel word.

The end parts of the m_1 -bit channel words in a coding state of channel code C_1 and the beginning parts of the m_2 -bit channel words in a set of channel code C_2 are arranged to comply with said runlength constraint.

The invention further relates to a device for encoding, a signal comprising a stream of databits of a constrained binary channel signal, a record carrier and a device for decoding.

Fig. 1